

Work Order ID 76919

76919

Page 1

Wednesday, November 23, 2011 3:31:43 PM

Item ID: D205-634-041

Revision ID:

Item Name: Replacement Skidtube

Start Date: 11/23/2011 Start Qty: 1.00

Required Date: 11/30/2011 Req'd Qty: 1.00

Reference:

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2580-041	Rev.E								

100

0.00

100

DC

Document Control

DOCUMENT CONTROL

Memo

0.00

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

CHG002 S12/01/11

110

0.00

110

CNC Bend 1

CNC Delta 100 Bender

BENDING MACHINE - SKIDTUBES

Memo

0.00

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

1 / S12/01-30

B76919

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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N900040100Setup Start ***NS1***

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Required Date: 11/30/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

0.00

120

Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends and remove bending marks

2- Prepare tube for welding as per QSI 004

7

①

/

CF

12-2-7

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

1

0

BE12-02-07

W/O:		WORK ORDER CHANGES					
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00

140

Skidtubes

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI 004
A/R Aluminum Rod *M119712*

2-Grind welds on step as per Dwg D2580

MB2/DP 12/02/08~~3-Weld spacers as per dwg D2580~~*CF*
~~3-N/A~~ Insert D4202-1 spacer, swage as per QSI002 and trim/ grind
flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2
x17G to start expansion and finish with 1/2 x 18G to achieve dwg dimension.4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",
adjust stopper not to hit web. Deburr

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

1 0 CF 12-2-7

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

QC10- Inspect visual per QSI004- ground welds

0.00

150

QC

Memo

0.00

Quality Control

160

QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.00

Quality Control

170

Pressure Wash per QSI005 4.3

0.00

170

HandFinish

Memo

0.00

Hand Finishing

✓ Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

1 / 12/02/09

W/O:		WORK ORDER CHANGES					
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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
180									
Powdercoat									
Powder Coating									
	Memo								
	START TIME: 11:50	0.00							
	OVEN TEMPERATURE: 320 °F								
	FINISH TIME: 12:20								
190	QC3- Inspect Part Finish	0.00							
190									
QC									
Quality Control	Memo								

1X ✓ M/L 12/02/09

1x ✓ M/L 12/02/13

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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

200

0.00

200

HandFinish

Hand Finishing

Memo

0.00

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R Sikaflex-291 11119508

Sikaflex expire date: 12/08

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 11119508

Sikaflex expire date: 12/08

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: 11119091

1 of 11 plates

Dart Aerospace Ltd

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 Required Date: 11/30/2011 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 *210* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024	0.00 <i>8/12/14</i> 0.00				<i>10</i>			
220 *220* Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPPD205-634-041 Location: _____ PPP Rev: <i>M</i>	0.00 0.00							<i>(1x) SP12-02-14</i>
230 *230* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							<i>M.L.S 12/02/15</i> <i>12-02-15</i>

W/O:		WORK ORDER CHANGES					
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Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 11/23/2011

Required Date: 11/30/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19
per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1		Manufactured	No			140	Each	492.0000	20	20			

D4202-1

Spacer

**

Location	Loc Qty	Loc Code
LG002	492	
66929	106	
67129	196	
67308	1	
67430	140	
72639	49	

B77729

20

CF 12.2.7

D2580-1

Manufactured No

110

Each

12.0000

1

1

D2580-1

205 Skidtube bent detail

**

SAD

12-01-30

Location	Loc Qty	Loc Code
LG	12	
72965	1	
76174	2	
76175	2	
76510	2	
76511	1	
76570	2	
76571	2	

B 79282

1

W/O:		WORK ORDER CHANGES					
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Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 11/23/2011

Required Date: 11/30/2011

Start Qty: 1.00

Required Qty: 1.00

D2576-3 Manufactured No 140 Each 104.0000 1 1

D2576-3

Step (maching detail)

**

BE 12-02-08

Location

Loc Qty

Loc Code

LG

104

66156

4

70883

50

74136

50

D2855 Manufactured No 200 Each 51.0000 1 1

D2855

Cap

**

B35074 (x1) 12/02/13

Location

Loc Qty

Loc Code

FP002

49

73347

49

FP007

2

65519

2

AN3-5A Purchased No 200 Each 886.0000 2 2

AN3-5A

Bolt

**

12/02/13

Location

Loc Qty

Loc Code

ST350

886

115371

46

117423

340

118626

300

119355

200

AN960JD10L NAS1149D0332J Purchased No 200 Each 0.0000 2 2

***AN960JD10I *** ✕

Washer

**

1119042 (x2) 12/02/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 11/23/2011

Required Date: 11/30/2011

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130

Purchased

No

200

Each

1,455.000

50

50

ALS7-1032-130 X

**

M119084 (x50) M 12/02/13

Insert ALS4-1032-130

Location

Loc Qty

Loc Code

ST281

113

117717

27

118966

86

ST282

1342

119530

1342

AN3C4A

Purchased

No

200

Each

1,675.000

50

50

AN3C4A

**

M120423 (x50) M 12/02/13

BOLT

Location

Loc Qty

Loc Code

ST350

1675

117313

2

117688

5

117872

10

118112

16

118451

2

118838

962

119328

678

AN960C10L

NAS1149C0332

Purchased

No

200

Each

0.0000

50

50

AN960C10I X

**

x1120648 (x50) M 12/02/13

washer

W/O:		WORK ORDER CHANGES					
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Required Date: 11/30/2011

Start Qty: 1.00

Required Qty: 1.00

D3566-13	Manufactured	No	200	Each	21.0000	1	1
D3566-13						**	B76947 (x1) Jul 12/02/13
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	20	
73322	20	
FP014	1	
68341	1	

D3566-5	Manufactured	No	200	Each	21.0000	1	1
D3566-5						**	B76945 (x1) Jul 12/02/13
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	21	
75069	21	

D3566-1	Manufactured	No	200	Each	15.0000	2	2
D3566-1						**	B77569 (x2) Jul 12/02/13
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	13	
74518	13	
FP015	2	
68924	2	

D3564-11	Manufactured	No	200	Each	12.0000	1	1
D3564-11						**	B76268 (x1) Jul 12/02/13
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	12	
74705	12	

W/O:		WORK ORDER CHANGES					
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Start Date: 11/23/2011

Required Date: 11/30/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-13

Manufactured No

200

Each

27.0000

1

1

D3564-13

Wearshoe

**

1376946 (x1) del 12/02/13

Location

Loc Qty

Loc Code

FP001

7

73323

7

FP002

19

75045

19

FP017

1

71594

1

D3564-9

Manufactured No

200

Each

21.0000

1

1

D3564-9

Wearshoe

**

1378872 (x1) del 12/02/13

Location

Loc Qty

Loc Code

FP

2

73345

2

FP001

14

75071

14

FP019

5

67590

4

69943

1

Dart Aerospace Ltd

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Start Qty: 1.00

Required Qty: 1.00

D3564-5 Manufactured No

200

Each

35.0000

1

1

D3564-5

Wearshoe

**

12/02/13

Location

Loc Qty

Loc Code

FG

2

34806

2

FP001

32

74543

10

76269

22

✓

FP019

1

73330

1

D2594-3 Manufactured No

200

Each

592.0000

16

16

D2594-3

O-Ring, 205 Skidtube

**

12/02/13

Location

Loc Qty

Loc Code

FP

394

65518

41

66952

55

73490

298

FP004

198

73490

198

✓ 16

D2594-1 Manufactured No

200

Each

208.0000

16

16

D2594-1

Plug, 205 Skidtube

**

1377035 (x16) 12/02/13

Location

Loc Qty

Loc Code

FP

208

73401

30

74442

178

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Shop Packet Print

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Dart Aerospace Ltd

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LIST OF MATERIALS					PART NUMBER	DESCRIPTION
ITEM	QTY -041	QTY -045	QTY -047			
1	X				D2580-041	SKIDTUBE ASSEMBLY
2		X			D2580-045	SKIDTUBE ASSEMBLY
3			X		D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1		D2500-1-190	EXTRUSION
5			16		D2570	BUSHING
6	1	1	1		D2576-3	STEP
7	20	24	25		D2579	SPACER
8	16	16	8		D2594-1	PLUG
9	16	16	8		D2594-3	O-RING
10	1	1	1		D2596	205 WEB
11	1	1	1		D2855	AFT CAP
12	1	1			D3564-5	WEARSHOE
13	1	1			D3564-9	WEARSHOE
14	1	1			D3564-11	WEARSHOE
15	1	1			D3564-13	WEARSHOE
16	2	2			D3566-1	GASKET
17	1	1			D3566-5	GASKET
18	1	1			D3566-13	GASKET
19			1		D4406-041	WEARPLATE ASSEMBLY
20			1		D4406-043	WEARPLATE ASSEMBLY
21	50	50			ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
22	50	50			AN3C4A	BOLT
23	2	2	2		AN3-5A	BOLT
24			8		AN4-45A	BOLT
25	50	50			NAS1149C0332R	WASHER (AN960C10L)
26	2	2	2		NAS1149D0332J	WASHER (AN960JD10L)
27			8		MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs
D2580-045 = 34.5 lbs
D2580-047 = 37.7 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

SHOP COPY
RETURN TO
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 10919
2011-11-23

RELEASED
2011-08-29

E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 1 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
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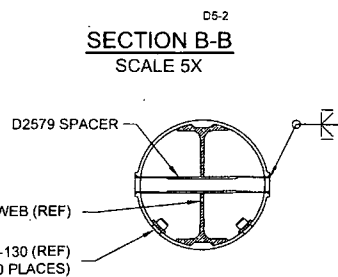
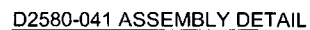
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED

2011-08-29

DETAIL C D3-2

SCALE 5X

GRIND FLUSH 4 PL

D2576-3 STEP

GRIND FLUSH

LOCATION RIDGE ON UNDERSIDE OF D2576-3

1/4

DESIGN	<i>4</i>	DART AEROSPACE LTD	
DRAWN	RF	HAWKESSBURY, ONTARIO, CANADA	
CHECKED	<i>10</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>DS</i>	D2580	SHEET 2 OF 8
APPROVED	<i>10</i>	TITLE	SCALE
DE APPR.	<i>10</i>	205 SKIDTUBE ASSEMBLY	NTS
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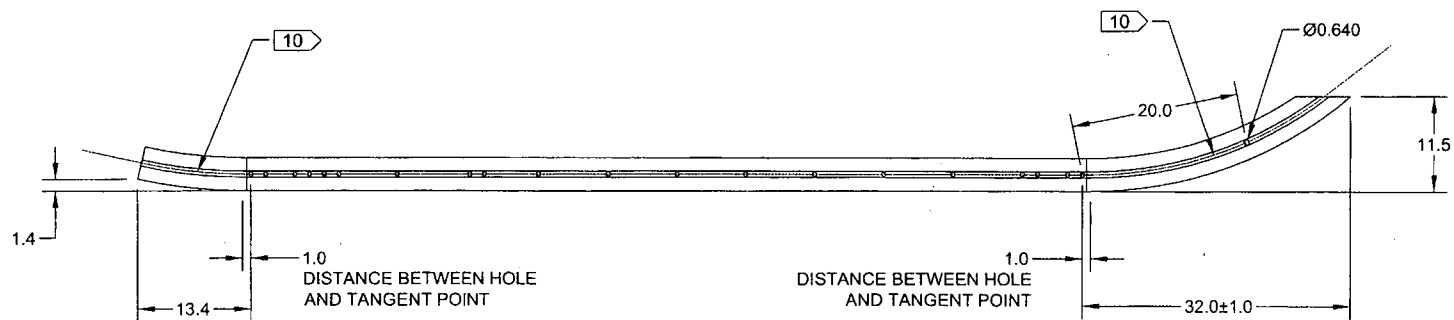
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

769A

RELEASED
2011-08-28
WY

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 3 OF 8
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DE APPR.	#	205 SKIDTUBE ASSEMBLY	NTS
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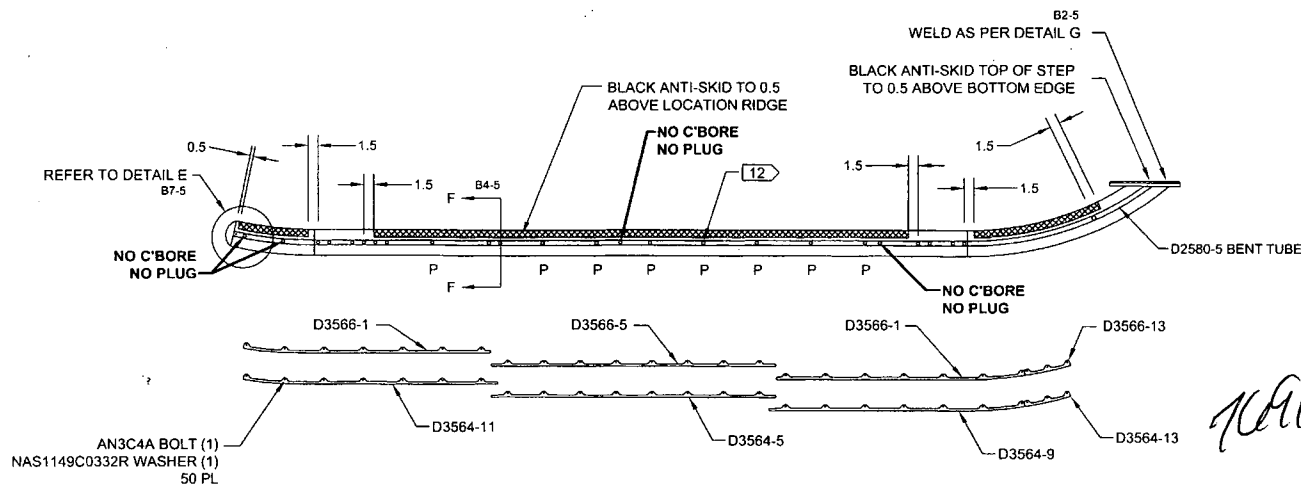
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

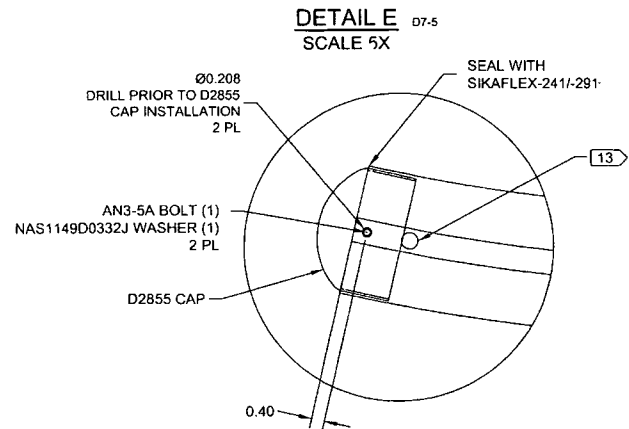
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

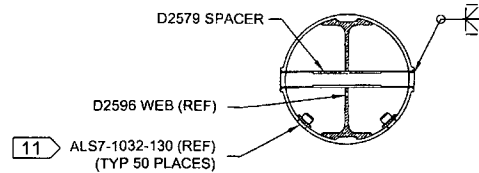
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D2580-045 ASSEMBLY DETAIL



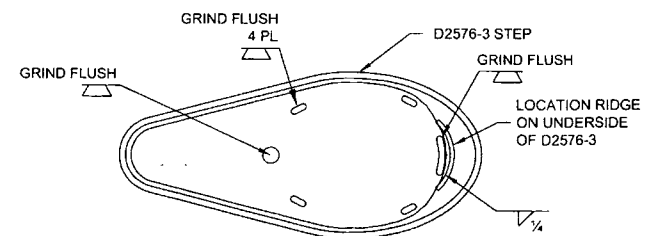
SECTION F-F SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (24 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL G SCALE 5X



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2011-08-29
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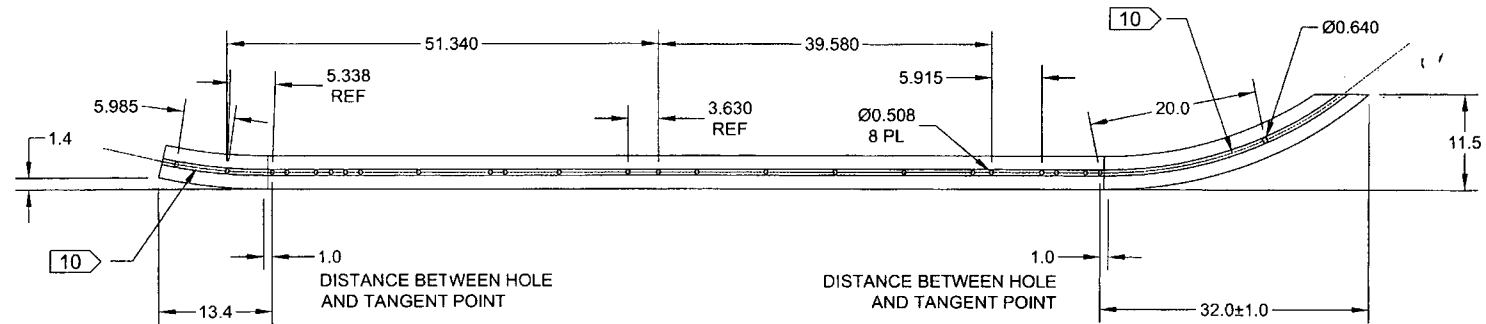
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

76919

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2011-08-29

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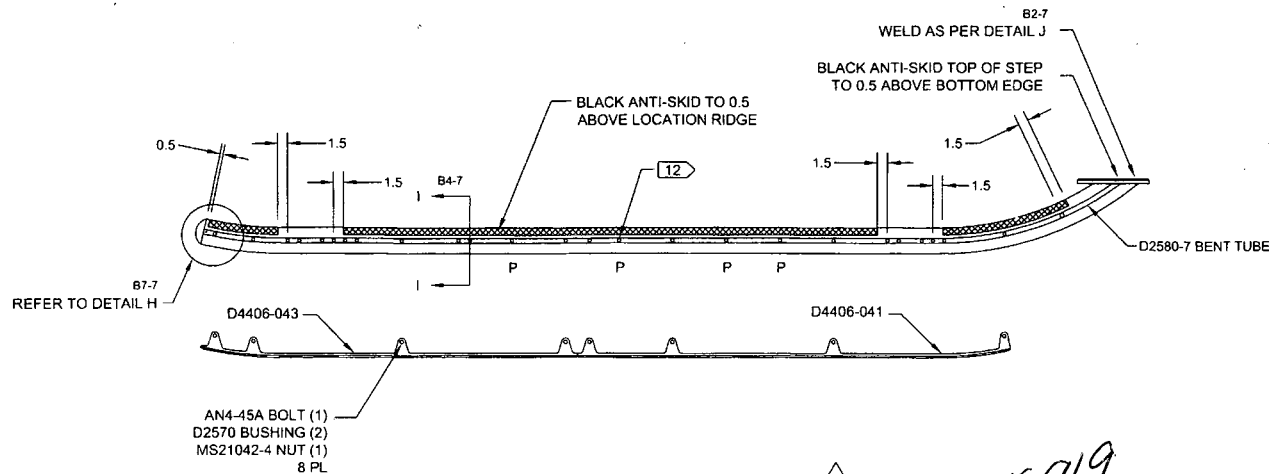
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

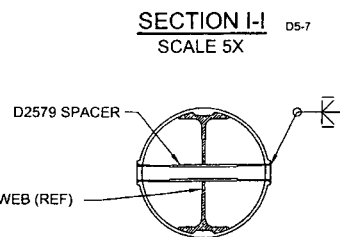
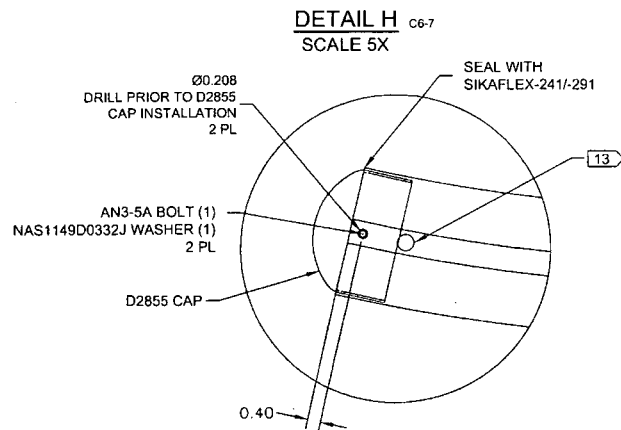
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

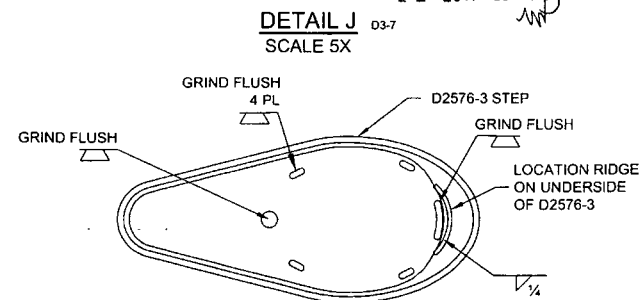


D2580-047 ASSEMBLY DETAIL E



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (25 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP



DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 6 OF 8
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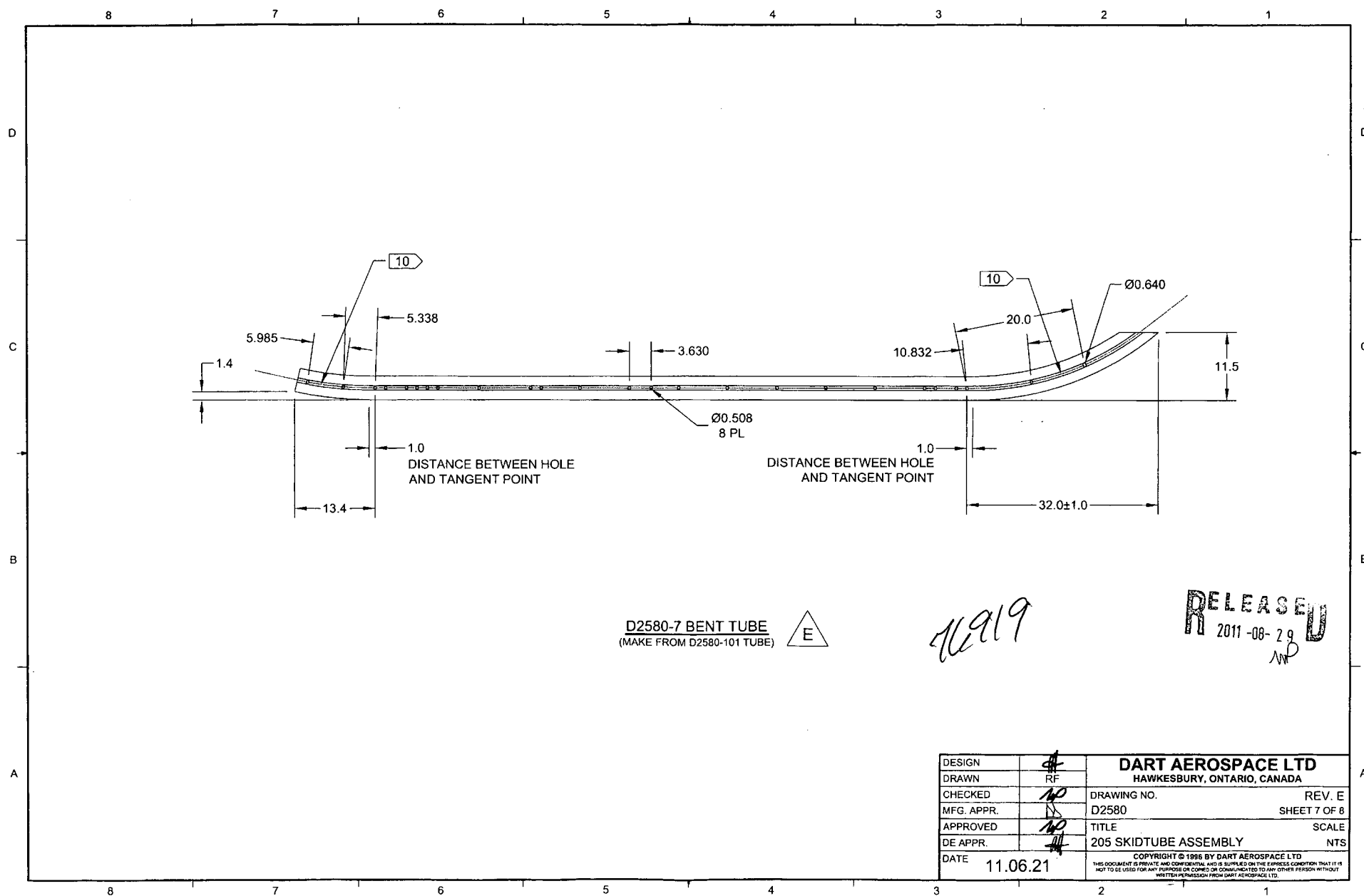
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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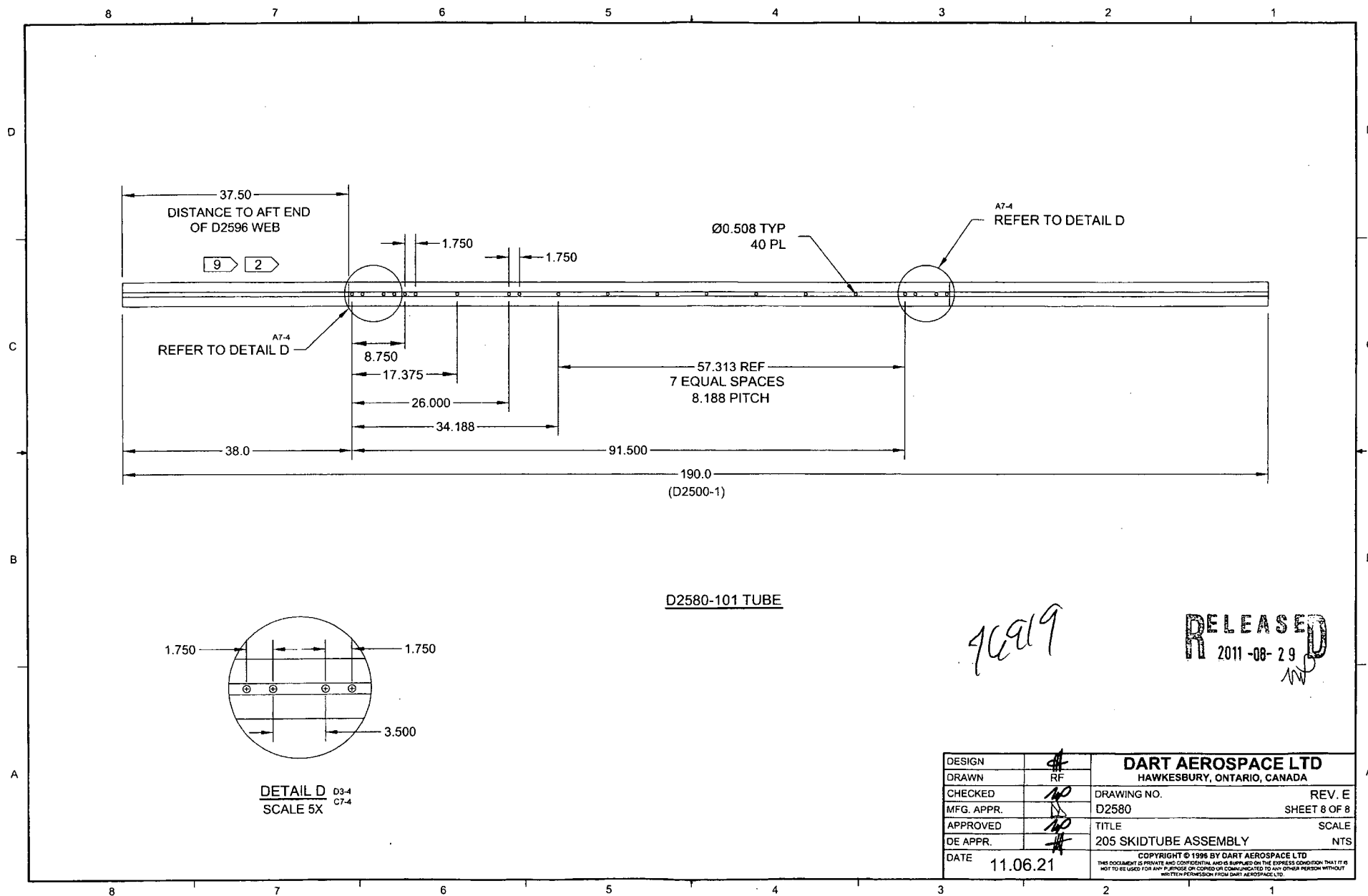
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 76919

76919

Page 1

Wednesday, November 23, 2011 3:31:43 PM

Item ID: D205-634-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Replacement Skidtube

Stop ***NS2***

Start Date: 11/23/2011 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 11/30/2011 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: *[Signature]* Date: *11/23*

Tooling:

Date:

Run Start ***NR1***

QC: Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
----------	--------------

D2580-041	Rev.E
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100	DOCUMENT CONTROL	0.00
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100

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041

CHG002

005

See Attachment M.C.5

(1)

M.C.5 12/02/14

110	BENDING MACHINE - SKIDTUBES	0.00
-----	-----------------------------	------

110

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

1 0 SAD 12-01-30

Change Record
Part Number D205-634-041/041DG/041G
Description 205/212/412 SKIDDRUG

D205-634-041/041DG/041G

205 212 412 SKIDTUBE

Page 1 of 1[illegible]